

**§418.34 Valid headgate deliveries.**

Project water may be delivered to headgates only as provided in §§418.8 and 418.10. Water delivered to lands that are not entitled to be irrigated or not in accord with decreed water duties is difficult to quantify at best because it is not typically measured. Since it is not likely to be a part of the total actual headgate deliveries, yet is a part of the total deliveries to the Project, it will manifest itself directly as a lower efficiency. Thus, it will either reduce the District's incentive credit or increase the storage debit by the amount improperly diverted. All other users outside the Project are thereby held harmless but the District incurs the consequence. This approach should eliminate any potential disputes between the District and the Bureau regarding the quantity of water misappropriated.

**§418.35 Efficiencies.**

The established target efficiencies under this part are shown in the Expected Project Distribution System Efficiency table (§418.13 (a)(4)). The efficiency of the Project will vary with the amount of entitlement water actually delivered at the headgates. Since most of the distribution system losses such as evaporation and seepage do not change significantly with the amount of water delivered (i.e., these losses are principally a function of water surface area and the wetted perimeter of the canals), the Project efficiency requirement is higher as the percent of entitlement water actually delivered at the headgates increases. The actual efficiency is calculated each year after the close of the irrigation season based on actual measured amounts. The application of any adjustments to Lahontan Reservoir storage or Truckee River diversions resulting from the efficiency is always prospective.

**§418.36 Incentives for additional long term conservation.**

(a) As an incentive for the District to increase the efficiency of the delivery system beyond the expected efficiency of 65.7 percent (66.9 percent with full delivery) as shown in the Newlands Project Water Budget table, 1995 Example, the District will be allowed to

store and use the Carson River portion of the saved water at its discretion, in accordance with Nevada State Law and this part.

(1) If the District is able to exceed its expected efficiency, the District may store in Lahontan Reservoir two-thirds (2/3) of the additional water saved. (The remaining one-third (1/3) of the water saved will remain in the Truckee River through reduced diversions to Lahontan Reservoir). This water will be considered incentive water saved from the Carson River and will not be counted as storage in determining diversions from the Truckee River or computing the target storage levels for Lahontan Reservoir under this part.

(2) For purposes of this part, incentive water is no longer considered Project water. The District may use the water for any purpose (e.g., wetlands, storage for recreation, power generation, shortage reduction) that is consistent with Nevada State Law and Federal Law. The water will be managed under the District's discretion and may be stored in Lahontan Reservoir until needed subject to the limitations in (a)(3) of this section.

(3) The amount of incentive water stored in Lahontan Reservoir will be reduced under the following conditions:

(i) There is a deficit created and remaining in Lahontan Reservoir from operations penalties in a prior year;

(ii) The District releases the water from the reservoir for its designated use;

(iii) During a spill of the reservoir, the amount of incentive water must be reduced by the amount of spill; and

(iv) At the discretion of the District, incentive water may be used to offset the precautionary drawdown adjustment to the Lahontan storage objective.

(v) At the end of each year, the amount of incentive water will be reduced by the incremental amount of evaporation which occurs as a result of the increased surface area of the reservoir due to the additional storage. The evaporation rate used will be either the net evaporation measured or the net historical average after precipitation is taken into account. The method of calculation will be agreed to

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by the District and the Bureau in advance of any storage credit.

(b) An example of this concept is:

Example: *Incentive Operation*—

(1) At the end of the 1996 irrigation season, the Bureau and the District audit the District's water records for 1996. The District's water delivery records show that 194,703 acre-feet of water were delivered to farm headgates. On the basis of their irrigated acreage that year (59,075) the farm headgate entitlement would have been 216,337 acre-feet. On the basis of 90 percent deliveries for 59,075 acres (194,203 divided by 216,337 = 0.90) the established Project efficiency requirement was 65.1 percent.

(2) On the basis of the established Project efficiency (66.1 percent), the Project diversion required to make the headgate deliveries would be expected to be 291,909 acre-feet (194,703 divided by 0.651 = 291,909). An examination of Project records reveals that the District only diverted 286,328 acre-feet which demonstrated actual Project efficiency was 68 percent and exceeded requirements of this part.

(3) The 5,581 acre-feet of savings (291,909-286,328 = 5,581) constitutes the savings achieved through efficiency improvements and the District would then be credited two-thirds (3,721 acre-feet=5,581×2/3) of this water (deemed to be Carson River water savings) as incentive water.

(4) This incentive water may be stored in Lahontan Reservoir or otherwise used by the District in its discretion consistent with State and Federal Law (e.g., power generation, recreation storage, wildlife, drought protection, etc.).

#### §418.37 Disincentives for lower efficiency.

(a) If the District fails to meet the efficiencies established by this part, then, in effect, the District has borrowed from a subsequent year. The amount borrowed will be accounted for in the form of a deficit in Lahontan Reservoir storage. This deficit amount will be added to the actual Lahontan Reservoir storage quantity for the purpose of determining the Truckee River diversions to meet storage objectives as well as all other operating decisions.

(b) The amount of the deficit will be cumulative from year to year but will not be allowed to exceed 26,000 acre-feet (the expected variance between the MAD and actual water use). This limit is expected to avoid increasing the severity of drought and yet still allow for variations in efficiency over time due to weather and other factors. This ap-

proach should allow the District to plan its operation to correct for any deficiencies.

(c) The deficit can be reduced by crediting incentive water earned by the District or reducing the percentage of headgate entitlement delivered either through a natural drought or by the District and its water users administratively limiting deliveries while maintaining an efficiency greater than or equal to the target efficiency.

(d) If there is a natural drought and the shortage to the headgates is equal to or greater than the deficit, then the deficit is reduced to zero. If the shortage to headgates is less than the deficit then the deficit is reduced by an amount equal to the headgate shortage. During a natural drought, if the percentage of maximum headgate entitlement delivered is 75 percent or more then the District will be subject to the target efficiencies and resultant deficits or credits.

(e) If the District has a deficit in Lahontan Reservoir and earns incentive water, the incentive water must be used to eliminate the deficit before it can be used for any other purpose. The deficit must be credited on a 1 to 1 basis (i.e., actual efficiency savings rather than  $\frac{1}{3}$ - $\frac{2}{3}$  for incentive water).

(f) An example of the penalty concept is:

Example: *Penalty*—

In 1996 the District delivers 90 percent of the maximum headgate entitlement or 194,703 acre-feet (216,337×.90) but actually diverts 308,000 acre-feet. The efficiency of the Project is 63.2 percent (194,703 divided by 308,000). Since the established efficiency of 65.1 percent would have required a diversion of only 299,083 acre-feet (194,703 divided by .651) the District has operated the system with 8,917 acre-feet of excess losses. Therefore, 8,917 acre-feet was borrowed and must be added to the actual storage quantities of Lahontan Reservoir for calculating target storage levels and Truckee River diversions.

#### §418.38 Maximum allowable diversion.

(a) The MAD established in this part is based on the premise that the Project should be operated to ensure that it is capable of delivering to the headgate of each water right holder the full water entitlement for irrigable eligible acres and includes distribution system losses. The MAD will be established (and is likely to vary) each year.